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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/539,210	02/06/2006	Jonathan Mark Hardy	056258-5106	2342	
9629 MORGAN LE	7590 06/13/2007 WIS & BOCKIUS LLP		EXAMINER		
1111 PENNSYLVANIA AVENUE NW			COPPINS, JANET L		
WASHINGTO	DN, DC 20004		ART UNIT	PAPER NUMBER	
			1626		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)			
	10/539,210	HARDY ET AL.			
Office Action Summary	Examiner	Art Unit			
	Janet L. Coppins	1626			
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the c	orrespondence address			
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D.  - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be timwill apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D. (35 U.S.C. § 133).			
Status		•			
1) Responsive to communication(s) filed on 27 M	larch 2007.				
<u> </u>					
3) Since this application is in condition for allowar					
closed in accordance with the practice under E	Ex parte Quayle, 1935 C.D. 11, 45	53 O.G. 213.			
Disposition of Claims					
<ul> <li>4)  Claim(s) 1-15 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdraw</li> <li>5)  Claim(s) is/are allowed.</li> <li>6)  Claim(s) 1,7-11 and 13 is/are rejected.</li> <li>7)  Claim(s) 4-6 and 14 is/are objected to.</li> <li>8)  Claim(s) are subject to restriction and/o</li> </ul>	wn from consideration.				
Application Papers					
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) accomposed and any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Examine	epted or b) objected to by the Edrawing(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119					
a) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Application rity documents have been received u (PCT Rule 17.2(a)).	on No ed in this National Stage			
Attachment(s)					
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa	te			

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#### **DETAILED ACTION**

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1. Claims 1 and 4-14 are now pending in the instant application.

## Response to Amendment

2. The Examiner acknowledges receipt of Applicants' Amendment and Response of March 27, 2007. Applicants have cancelled claims 2, 3 and 15 and have amended claims 1, 4, 5 and 14.

## Claim Rejections - 35 USC § 102

- 3. (a) Claims 1-8, 10, 11, 13, and 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Hamamoto et al, Chemistry Letters, 1986.
- (b) Claims 1, 2, 7, 8, 10, 11, and 13 previously rejected under 35 U.S.C. 102(b) as being anticipated by JP 62-212395.
- (c) Claim 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Wilk et al, Tetrahedron Letters, 2001.
- 4. In view of Applicants' amendatory changes to the claims, the Examiner withdraws the anticipation rejections of the aforementioned claims.

# Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.

- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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- 7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 8. Claims 1, 2, 7, 8, 10, 11, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over JP62-212395.

## Applicants are claiming the following compounds:

Applicants are claiming a method for the preparation of phosphitylation agents  $R^1-Y^1-P(NR^2R^3)_2$ , according to the process of claim 1, comprising:

- a) reacting a compound of formula  $PX_3$  with a compound of formula  $HNR^2R^3$  to form a compound  $X-P(NR^2R^3)_2$ 
  - b) reacting  $X-P(NR^2R^3)_2$

# Determining the scope and content of the prior art

The JP document teaches the preparation of a phosphorous amide compound,  $R^3$ -O-P(NR<sup>2</sup>N<sup>3</sup>)<sub>2</sub>, which is the same as the instantly claimed process of preparation of instant claim 1. The JP document teaches the reaction of a trihalophosphine (the same as Applicants' "PX<sub>3</sub>")

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with a di-isopropylamine (the same as Applicants' "HN-R<sup>2</sup>R<sup>3</sup>") to form a bisaminomonohalogenphosphine (the same as Applicants' "X-P(NR<sup>2</sup>R<sup>3</sup>)<sub>2</sub>") which is then reacted with an alcohol, R<sub>3</sub>-OH (same as Applicants' "R<sup>1</sup>-Y<sup>1</sup>-H") in bases such as Et<sub>3</sub>N, under anhydrous conditions.

## Ascertaining the difference between the prior art and the claims

The difference between the prior art and the claims is that Aristoff does not teach a single disclosed compound or species that anticipates the instant claims.

## Resolving the level of ordinary skill in the pertinent art

However, minus a showing of unobvious results, it would have been obvious to one of skill in the art to prepare the prostacyclin analogs as instantly claimed in claim 1 since the prior art reference discloses a similar genus of prostacyclin analogs with the same activity of inhibiting platelet aggregation. Aristoff teaches a larger genus of compounds that completely encompass the smaller genus that is instantly claimed as structure I in claim 1. One would be motivated to prepare the instantly claimed invention since Aristoff has enabled and taught the broad scope of compounds in the many examples and formulae disclosed in the '075 patent, for example in columns 31-7. Therefore, one skilled in the art would know to pick and choose from the various substituents disclosed and the same core prostacyclin analog structure, as guided by Aristoff in formula XI, particularly when they possess the same activity and share the same utility of treating ischaemic disorders. Therefore, absent a showing of unobvious and superior properties, the instant claimed genus of prostacyclin analogs would have been suggested to one skilled in the art.

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## Claim Objections

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9. Claims 9, 12, and 15 are objected to as being dependent on rejected base claims.

### Conclusion

10. In conclusion, claims 1 and 4-14 are pending, claims 1-8, 10, 11, 13, and 14 are rejected, and claims 9, 12, and 15 are objected to.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Coppins whose telephone number is 571.272.0680. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571.272.0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Janet L. Coppins January 8, 2007

> Joseph K. M<sup>c</sup>Kane SPE, Art Unit 1626

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